Meriam MFT 4000

Multifunction Documenting

Modular Pressure Calibrator with HART Capability

The MFT 4000 Calibrator delivers the versatility of a unique 3-bay modular calibrator and the convenience of HART Communications protocol in one hand-held unit.

- **Multifunction Calibrator — HART Communication Option**
- **Three Modular Sensor Bays**
- **View up to Four Simultaneous Measurements on the Configurable Display**
- **Interchangable "Hot Swap" Modules —Vacuum/Differential/Gauge/Absolute Pressure — RTD Temperature**
- **Call for Pressure Modules**

Order #	Description	Price
JSMFT4000	Calibrator – base unit for all models	$ 1,598
JSMFT4010	Calibrator with HART Communicator	$ 2,666
JSA36750	Hard Carrying Case	$ 85

Druck/Unomat TRX II

Documenting Multifunction Calibrator

This calibrator is designed for fast, easy setup and use. Simply scroll through through the menus and select the appropriate parameter. Download and document calibration reports and calibration data for audit safety.

- **Typical Accuracy ±0.02%**
- **Sources and Reads all Common T/Cs and RTDs**
- **Sources and Reads mV, V, mA, Ohms,and Frequency**
- **Measures Pressure Via Interchangeable Modules**
- **RS-232C and PCMCIA Card Interface**

Order #	Description	Price
JS23320E	Multifunction Calibrator	$2,765

Altek 830

Multifunction Process Calibrators

Calibrate your analog two-wire transmitters and checkout loops

Completely calibrate 2-wire analog transmitters with one calibrator. Built-in loop supply & dual display to keep track of transmitter input & output.

- **DC Voltage and Current**
- **Thermocouples and RTDs**
- **Frequency and Resistance**
- **Simulates 2-Wire Transmitters**
- **Powers and Measures 2-Wire Transmitters**
- **Measures AC Voltage to 250V**
- **Tests Continuity**

Order #	Description	Price
JS830E	Altek 830 Multifunction Calibrator	$1,424
JS830-KP	Altek 830 Keypad Version Multifunction Calibrator	$1,424
JS90-JS1	Altek Mod Pack Pressure Module Holder/Cable	$156
JS22171T	JKTE Mini Plug to Pigtail Lead Set	$ 42
JS21037E-120	120V Battery Eliminator	$ 33

Altek 820

Multifunction Process Calibrators

Lighten your toolbox

Combination calibrator and troubleshooting meter. Carry the one calibrator that replaces a toolbox full of single function calibrators.

- **Use it as a Calibrator – Source and Read mA, V, RTD, T/C and Hz**
- **Use it like a Multimeter – Read AC and DC V, Ω and Check Continuity**
- **Easy-to-Learn, Easy-to-use, Simple Menuless Operation**
- **Thermocouple Types J, K, T and E Plus Pt100 Ω RTD**
- **Simulates 2-wire Transmitters**
- **Built-in Loop Power Supply**

Order #	Description	Price
CS820E	Altek 820 Multifunction Calibrator	$1,088
CS22171T	JKTE Mini Plug to Pigtail Lead Set	$ 42
CS23120E-L	Replacement Lead Kit for 820E	$ 120

Ametek ASC 300

Advanced Signal Calibrators

The ASC 300 calibrator is a true multifunction calibrator.

This advanced unit offers the ability to read and source temperature signals, pressure signals, and loop signals from the palm of your hand. This unit features an easy-to-read graphical user interface with function keys and is easy to operate as well.

- **True Multifunction Calibrator**
- **Graphical User Interface**
- **Powers a Loop**
- **Reads and Sources TC, RTD, Pulsed Transmitters**
- **Reads and Sources Current, Voltage, Resistance, and Frequency**

Order #	Description	Price
JSASC300G	Ametek ASC 300 Advanced Signal Calibrator	$ 1,687
JSSPK-ASC-002	Rechargeable Battery Kit	$ 74
JSSPK-ASC-003	Charger - 115/230 VAC	$ 301
JS123958	Serial Cable - Serial to Serial connection	$ 17

Calibrators

Transmation 196
Automated Pressure Calibrator

Combine the low pressure (10" H_2O) and the documentation capability for the perfect pressure calibrator for pharmaceutical applications. Internal pump eliminates the need for external pumps.

- **Built-In Pump Generates Vacuum/Pressure for Hands-Free Calibration**
- **Process Modules: DC mA and V Simulator, Thermocouple Input/Output, and RTD Input/Output**
- **Pressure Ranges from Vacuum to 5,000 PSIG (see page 10 for pressure modules)**
- **Pressure Accuracy up to ±0.025% of Reading**

Order #	Description	Price
JS196P	Transmation 196 Automated Multifunction Pressure Calibrator	$5,959
JS190-CS	Carrying Case	$ 68

Transmation 90 Series
Pressure Modules

The highest module accuracy offered!

Choose the high accuracy modules to complete your calibratrion system. The QuikCal modules work with the Transmation 190, 390 and Altek 830.

Order	Range	Media	Accuracy	Price
Gauge modules				
JS90-5G	5 PSIG	Clean, dry gas only (Dirt/moisture trap or filter recommended)	>10 % of range** ±0.025 % rdg +0.015 % FS	$886
JS90-10G	10 PSIG			$886
JS90-30G	30 PSIG			$886
JS90-100G	100 PSIG			$886
JS90-300G	300 PSIG			$886
JS90-500G	500 PSIG	Gas or liquid compatible with 316SS and flouro-carbon rubber	≤10 % of range ±0.030 % FS	$886
JS90-1000G	1,000 PSIG			$886
JS90-2500G	2,500 PSIG*			$886
JS90-5KG	5,000 PSIG			$886
Differential modules				
JS90-10WD	±10 in H_2O diff.	Clean, dry gas only	±0.025 % FS	$886
Absolute Modules				
JS90-15A	15 PSIA	Clean, dry gas only	** Same as gauge modules	$886
JS90-30A	30 PSIA			$886
Vacuum Modules				
JS90-15V	Vac to 0 PSIG	Clean, dry gas only	± 0.05 % FS	$886
JS90-15C	Vac to 15 PSIG		± 0.05 % FS	$886

Transmation 390
Modular Pressure Calibrator

Uses the 90 series pressure modules to give you a choice of ranges, with up to ±0.025% accuracy (see module specifications). Plus, it has a 0–50 mA input for complete transmitter calibration.

- **Modular—Uses Transmation 90 Series Modules See Above Modules.**
- **Dual Display-Pressure and mA**
- **16 Engineering Units**
- **Built-In Switch Test (Dry Contact)**

Order #	Description	Price
JS390P	Pressure Calibrator (without modules)	$ 756

Druck DPI 615
Pneumatic or Hydraulic Documenting Pressure Calibrator

The DPI615 adds field error calculations with PASS/FAIL analysis and two-way PC communications for downloading procedures and uploading results.

- **Documenting Version**
- **1 PSI to 10,000 PSI Ranges**
- **Accuracy: ±0.025% FS all Ranges**
- **Sources and Reads 4–20 mA**
- **Precision Volume Adjustment**
- **Dual Display Pressure and mA**
- **Sources and Reads 4–20 mA**
- **Built-In Pressure/Vacuum Pump**

Order #	Description	Price
JS23176P-5G-D	Pressure Calibrator 5 PSIG	$3,200
JS23176P-30G-D	Pressure Calibrator 30 PSIG	$3,200
JS23176P-100G-D	Pressure Calibrator 100 PSIG	$3,200
JS23176P-300G-D	Pressure Calibrator 300 PSIG	$3,200

Transmation
Checkmate™ 600 Digital Pressure Gauge

Measure any pressure within your plant and use the gauge to check out your pressure switches as well.

- **±0.05% FS Accuracy**
- **Ten Selectable Engineering Units: PSIG, kPa, Pa, BAR, mBAR, kgf/cm2, "Hg, mmHg, "H2O, mmH2O**
- **1/8" FNPT Connections**
- **Switch Test Mode (Dry Contact)**
- **Switch Test "Freezes" the Trip Point**
- **Ranges from ±10 "H2O to 2000 PSI**

Order #	Description	Price
JS23415P-30	Digital Pressure Gauge, 30 PSID	$ 595
JS23415P-100	Digital Pressure Gauge, 100 PSID	$ 595
JS23415P-300	Digital Pressure Gauge, 300 PSIG	$ 595
JS23415P-1K	Digital Pressure Gauge, 1000 PSIG	$ 595

Transmation 1099PNC
500 PSI Digital Pressure Calibrator

The 1099PNC is a complete, high-accuracy pressure calibration system. The unit generates pressure to 500 PSI and is also available in kPa.

- **Generates 500 PSI/Measure 0–50 mA**
- **±0.1% Accuracy**
- **Simultaneous 41/2-Digit Pressure and Current Displays**

Order #	Description	Price
JS5836P-1	Pneumatic Calibrator/Hand Pump, 500 PSI	$1,957
JS5836P-2	Pneumatic Calibrator/Hand Pump, 3500 kPa	$1,957
JS5854P-3	Transcat High Pressure Hose Kit, 3 Foot (5000 PSI)	$ 160
JS5854P-6	Transcat High Pressure Hose Kit, 6 Foot (5000 PSI)	$ 174

Fluke 717/718

Pressure Calibrators

Interchangeable Pressure Modules

Interchangeable pressure modules make the 717 and 718 great values to the end user while at the same time providing for great efficiencies in performing pressure calibrations. With 29 modules to choose from, the 717 and 718 provide versatility in pressure calibration all from one instrument.

Fluke 717

- Internal Sensor Plus Interchangeable Modules
- Internal 30 PSI Sensor or 100 PSI Sensor
- 29 Modules, Ranges from 1.0 "H2O to 10,000 PSIG
- Two Line Display, Pressure and mA
- ±0.05% Accuracy

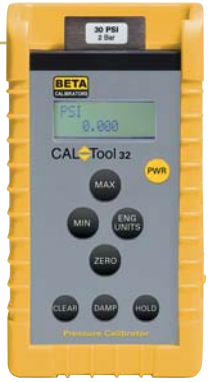
Fluke 718

- Built-In Pressure/Vacuum Hand Pump, with Vernier and Bleed Valve
- Pressure Measurement to 10,000 PSI/700 BAR
- Selectable Engineering Units
- Min/Max, Hold, Zero, Damp Functions
- Simple, Push Button User Interface

Order #	Description	Price
JS717-30G	Fluke 717 Pressure Calibrator, 30 PSIG	$ 995
JS717-100G	Fluke 717 Pressure Calibrator, 100 PSIG	$ 995
JS718-30G	Fluke 718 Pressure Calibrator, 30 PSIG	$ 1,695
JS718-100G	Fluke 718 Pressure Calibrator, 100 PSIG	$ 1,695
JS700iLF	In-Line Filter	$ 39

Beta CALTool 32

Pressure Calibrator/Manometers



Operation of these calibrators is made easy through the use of a sealed membrane keypad with simple controls. Combine it with a MECP-100 hand pump, and the CalTool 32 kit makes a perfect package to handle your pneumatic calibration requirements

- High Accuracy Gauge or Differential Capability
- Isolated SS Sensors on 300 PSI and 3,000 PSI units
- Intuitive Controls Make Operation Easy, Even for Infrequent Users
- Accuracy:±200" H2O ±0.05% of FS, ±0.03" H2O
  30 PSI ±0.05% of FS, ±0.001 PSI
  100 PSI and 300 PSI ±0.05% of FS, ±0.01 PSI
  3,000 PSI ±0.05% of FS, ±0.1 PSI
- Kit contains CALTool 32 Calibrator, Hand Pump (-12 to +100 PSI) fittings and connectors, rugged carrying case, test leads, 9 V battery, and NIST traceable certificate.

Order #	Description	Price
JSBetaCALTool32	Pressure Calibrator / Manometer, 100 PSI	$ 538
JSBetaCALTool32-300	Pressure Calibrator / Manometer, 300 PSI	$ 716
JSBetaCALTool32-3000	Pressure Calibrator / Manometer, 3000 PSI	$ 716
JSBetaCALTool32-3000K	Pressure Calibrator / Manometer, 3000 PSI, w/ Pump Kit	$1,428
JSBetaCALTool32-300K	Pressure Calibrator / Manometer, 300 PSI, w/ Pump Kit	$1,250
JSBetaCALTool32K	Pressure Calibrator / Manometer, 100 PSI, w/ Pump Kit	$ 805

Transmation 1091

Multifunction Pressure Calibrator

Interchangeable pressure modules provide flexibility, and allows you to purchased only the pressure ranges you require.

- Interchangeable Pressure Modules ±0.05% Accuracy
- Measure and Generate mV, V, and mA Signals
- 0.01% Basic DC Accuracy
- Selectable Engineering Units
- Low Differential to 5000 PSIG
- Diaphragm Isolated Pressure Modules Accept Any Fluid or Gas Compatible with 316 SS

Order #	Description	Price
JS1091PLUS	Process Signal Calibrator with SPBE Battery Pack	$1,678
JS1091PLUS-LP	Process Signal Calibrator with SPBE-LP Battery Pack	$1,736

Ashcroft ATE100

Modular Pressure Calibrator

Modular pressure calibrator allows you to purchase the ranges you require, thus providing a cost effective solution to your calibration needs.

- Interchangeable Pressure Sensors
- Standard Accuracy of 0.05% of Span
- Gauge, Vacuum, Absolute, and Draft
- Optional FM Approval Class 1, Div. 1, A, B, C, and D Areas

Order #	Description	Price
JS21025P	Modular Pressure Calibrator	$ 1,001
JS21025P-IS	Modular Pressure Calibrator FM Approved	$ 1,193
JS21025P-1	Modular Pressure Calibrator with Datalogging	$ 1,206
	Call for Pressure Module Ordering	

Transcat

Modular Pressure Calibrator

This is a must for technicians using any pressure calibrator. This moisture trap protects your calibrator from the transfer of moisture and dirt. The trap also prevents contamination within your pneumatics, and improves long-term reliability.

- Protects Your Calibrator from the Transfer of Moisture and Dirt
- Prevents Contamination of the Calibrator's Pneumatic System
- Improves Long Term Reliablity
- Reduces Maintenance Costs
- Simple To Use and Easy To Clean
- 1/8" NPT

Order #	Description	Price
CSIDT600-2	500 PSI Dirt/Moisture Trap	$ 190

Transmation 1045
DC Process Signal Calibrator

Excellent general purpose DC calibrator

For mA, mV, and voltage. Input and output circuits are both active at all times, and a toggle switch selects which signal is displayed on the calibrator. For calibrating 2-wire transmitters, the 1045E will power the loop while measuring transmitter output.

- **Input and Output Functions**
- **2-Wire Transmitter Simulation**
- **Ruggidized Metal Housing for Use in the Field**
- **FM Certified Non-incendive for Class I, Division 2, Groups A, B, C, and D**

Order #	Description	Price
JS1045E-01	DC Proocess Signal Calibrator for 115V	$ 1,446
JS1045E-02	DC Proocess Signal Calibrator for 115V or 220V	$ 1,465
JS500143-003	Test Leads	$ 36
JS759550-010	Replacement Batteries for 1045E	$ 56

Altek 942
Frequency Calibrator

Handheld calibrator with the accuracy of an 8-digit counter!

Calibrate flowmeters, turbines, vortex shedders and all the frequency instruments plantwide.

- **Match Your Signal**
  – Sine & Square Waves to 0.001% of Rdg
- **Built-in Frequency Counter Reads in Hz/kHz and CPM/CPH**
- **Counts-per-minute (CPM) and Counts-per-hour (CPH) Ranges**
- **Simple Totalizer Calibration**
  – Output & Count Pulses for Preset time
- **Optional Dry Contact Module (C-41) Adapts the 942 to Simulate and Measure Flowmeter Contacts and Relays**

Order #	Description	Price
JSALTEK942	Frequency Calibrator with Totalizer	$ 836
JS942-BNC	Frequency Calibrator with Totalizer and BNC Connector	$ 878
JS5501E	Altek Model C-41 Dry Contact Module	$ 302
JS21037E-120	AC Adapter, 120 VAC, 50/60 Hz	$ 33

Altek 434
High Accuracy mA Calibrator

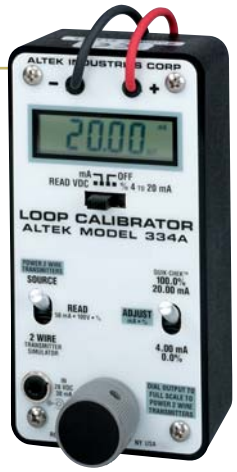
Better calibrations quickly and accurately.

No handheld mA calibrator has better accuracy or is as easy to use. Extra long battery life keeps you in the field calibrating.

- **Time Saving Automatic Features Auto-Chek™ Step, Ramp and Valve-Chek™**
- **Accurate to 0.005 mA from 4.000 to 20.000 mA**
- **Continuous Operation for a Full Week without Battery Changes – Over 44 hours at 12 mA**
- **Sources mA and Simulates Transmitters**
- **Built-In 24V Loop Supply and 250Ω Resistor for HART® Compatibility**
- **Read to 99.99 VDC and 52.000 mA**

Order #	Description	Price
JS434E	Altek 434 High Accuracy mA Calibrator	$ 584

Altek 334A
mA Calibrator



The world's best selling mA calibrator!

Easy one handed operation. Concentrate on the calibration, not on using the calibrator. Faster calibrations and long battery life to get more work done every day.

- **Use One Hand to Flip the Quik-Chek® Switch for Instant 4.00 and 20.00 mA**
- **Sources, Reads and Simulates mA**
- **Reads to 99.99 VDC and 52.00 mA**
- **Sources 0.00 to 24.00 mA or -25.0 to +125.0 % of 4 to 20 mA Span**
- **Accurate to 0.02 mA from 4.00 to 20.00 mA**

Order #	Description	Price
JS4353E	Altek 334A Calibrator, 4 to 20 mA	$ 461
JS3330T	Dual Soft Carrying Case	$ 24

Altek 934
mA/V Calibrator

The highest accuracy process calibrator!

Calibrate mA and VDC intruments with laboratory accuracy. Unbeatable specs and dual displays to monitor any combination of mA and V inputs and outputs.

- **Monitor Cal Input and Output with Dual 5 Digit Display**
- **Simultaneous Source and read to 0.001 mA, 0.001V and 0.01 mV**
- **±0.012% Accuracy – Accurate to 0.005 mA, 0.004V and 0.10 mV**
- **Scalable Display**
- **24 VDC Loop Power**
- **Carrying Case Included**

Order #	Description	Price
JS21037E	mA/V Calibrator	$ 1,318
JS21037E-120	120V Battery Eliminator	$ 33

Transmation Checkmate™ 100
mA Calibrator

The mA calibrator for the technician on the go. Easily set any 0-24mA value with intuitive UP and DOWN pushbuttons. Store up to 3 points in every range, even when the unit is turned off.

- **Recall and Source Up to 3 Points in Every Range**
- **Fast, Easy Set Up**
- **Accuracy: ±0.05% FS +1 LSD**
- **Power and Measure 2-Wire Transmitters: 0-24.00 mA Output current**
- **Includes Carrying Case and Leads**

Order #	Description	Price
JS23400E	Transmation Checkmate 100 mA Calibrator	$ 441

Fluke 707
mA Loop Calibrators

Easy Calibration Troubleshooting!

Spend your valuable time diagnosing the mA loop, not figuring out the calibrator. The 707 and 707EX (intrinsically safe) loop calibrators provide you quick, easy calibration troubleshooting of your process loop.

- **Intrinsically Safe (707EX)**
  - **ATEX Certification (Ex II 2 Eex Ia IIC T4 Zones 1 and 2**
  - **FM Certification N.I. Class I Div 2 Areas Group A-D**
- **Simultaneous mA and % Readout**
- **0.001 mA Resolution for mA Source, Simulate, and Measure**
- **Selectable Slow Ramp, Fast Ramp, and Step Ramp to Provide Smooth Outputs for Valve Slewing and Loop Functional Tests**
- **24V Internal Loop Supply to Power and Read a Transmitter**

Order #	Description	Price
JS707E	Fluke 707 mA Loop Calibrator	$ 595
JS707EX	Fluke 707EX mA Loop Calibrator (intrinsically safe)	$ 875

Altek 134-2
mA Calibrator

Easy to carry and use!

Small sized to go everywhere. Just the right calibrator to throw in the toolbox or clip on your belt. Affordable enough for every tech to carry one!

- **Sources and Reads mA**
- **Simulate 2-wire Transmitters**
- **Powers and Measures 2-wire Transmitters**
- **Quik-Chek® Push Buttons Output 4.00 and 20.00 mA and Any Third Point**
- **Accurate to 0.03 mA from 4.00 to 20.00 mA**
- **Optional Carrying Case with Belt Clip**

Order #	Description	Price
JS3331E-2	Altek 134-2 Pocketcal™ mA Calibrator	$ 332
JS3331E-CS	Carrying Case for Altek 134-2	$ 17

Meriam MFC 4100
HART® Communicator

The MFC 4100 is designed to optimize end user convenience and usability. Easy downloads keep this HART communicator current for all of your HART devices within the plant.

- **Update Device Comm Files Via the Internet**
- **Upload / Download Configurations**
- **Quick Menu Access Key**
- **HART® Menu Home Key**
- **Full Alpha-numeric Keypad**
- **Dedicated Text Edit Keys**

Order #	Description	Price
JSMFC4100	Communicator	$ 2,750
JSMFC4101	Communicator with Documenting Capability	$ 2,910
JSMFC4102	Communicator with Intrinsically Safe Rating	$ 2,888
JSMFC4103	Communicator with Documenting Capability & Intrinsically Safe rating	$ 2,999

Fluke 789
ProcessMeter

Save Time and Cost!

Process users save time and equipment costs by incorporating a meter and a loop calibrator into one instrument. By combining two instruments into one, calibration savings occur as there is only one instrument to calibrate.

- **24V Loop Power Supply**
- **HART Mode Setting with Loop Power adds 250 Ohm Resistor**
- **0-100% mA Span Check Buttons to Toggle between 4 and 20 mA**
- **DMM Designed to Meet 1000 Volt IEC 1010 CAT III Standards**
- **Precision 1000V, 440 mA True-RMS Digital Multimeter**
- **Frequency Measurement to 20 kHz**
- **20 mA DC Current Source / Loop Calibrator /Simulator**

Order #	Description	Price
JS789E	Fluke 789 ProcessMeter	$ 695

Fluke 715
mA/mV/V Process Calibrator

One Instrument... Two Functions!

Combines volt and mA source and read functions into one instrument, reducing acquisition and maintenance costs.

- **Accuracy ±0.02%**
- **0.001 mA Resolution**
- **Sources and Reads 0–24 mA**
- **Sources and Reads 0–10 V or 0–100 mV**
- **Simulate 2-Wire Transmitters**

Order #	Description	Price
JS715	mA/mV/V Process Calibrator	$ 795

Emerson Process Management
375 Field Communicator

The 375 is the only communicator you will need to configure, test, and diagnose your HART® and Foundation Fieldbus devices. You will be able to communicate with any device, by any manufacturer.

- **Most Complete Communicator Available– the New Universal Standard**
- **Intrinsically Safe**
- **Supports all HART® and Foundation Fieldbus Devices**
- **Easy Upgrade Over the Internet**
- **Interfaces with AMS PC Suite Software**
- **Emerson 375 Replaces the Emerson 275**

Order #	Description	Price
JS375HR1EKLU	HART, I/S, Easy Upgrade	$3,453
JS375HR1EKLUB	HART, I/S, Easy Upgrade, Spare Battery	$3,742
JS375HR1EKLUC	HART, I/S, Easy Upgrade, Expansion Module	$3,856
JS375HR1EKLUBC	HART, I/S, Easy Upgrade, Spare Battery, Expansion Module	$4,143
JS375FR1EKLU	HART and Fieldbus, I/S, Easy Upgrade	$4,401
JS375FR1EKLUBC	HART and Fieldbus, I/S, Easy Upgrade, Spare Battery, Expansion Module	$4,802

Calibrators

Fluke 724
Temperature Calibrator

A powerful, easy-to-use field calibrator!

Save setup time by storing frequently used setups within the calibrator. Use one instrument to source and measure all of your temperature requirements, including thermocouples and RTDs. Save on calibration costs by only having to calibrate one instrument.

- **Measures RTDs, Thermocouples, mA, Volts, and Ohms to Test Sensors and Transmitters**
- **Sources/Simulates 7 RTDs, 10 Thermocouples, Volts, and Ohms to Calibrate Transmitters**
- **RTD Source is Pulsed Excitation Compatible**
- **Performs Fast Linearity Tests with 25% and 100% Stepping**
- **Powers Transmitters Using Loop Supply with Simultaneous mA Measurement**

Order #	Description	Price
JS724T	Fluke 724 Temperature Calibrator	$1,295

Fluke 714
Temperature Calibrator

Source and read 9 thermocouples plus mv, all in one calibrator. Small enough to take anywhere in the plant.

- **Accuracy ±0.3°C + 10 µV**
- **Sources and Reads 9 T/C Types Plus mV**
- **Uses Mini-Plug T/C Terminations Only**

Order #	Description	Price
JS714	T/C Calibrator	$ 795

Transmation Checkmate™ 400
Thermocouple Calibrator

The thermocouple calibrator that is quick and easy to use with intuitive UP and DOWN pushbuttons. Additional stored settings allows you to recall the common setups you use every day.

- **Four T/C Types**
- **Recall and Source Up to 3 Points in Every Range**
- **Fast, Easy Set Up**
- **Source/Measure: Type J, K, T, and E Ranges**
- **Accuracy: ±1°C for temperatures above 0°C**
  ±2°C for temperatures below 0°C

Order #	Description	Price
JS23409T	Transmation Checkmate 400 Thermocouple Calibrator	$470
JS22171T	JKTE Mini Plug to Pigtail Lead Set	$ 42

Ametek/Jofra CSC 200
T/C and RTD Calibrator

Source and Measure temperature, pressure, and loop signals from the palm of your hand!

- **Highly Accurate for Temperature Calibrations**
- **Sources and Reads 13 T/Cs and 14 RTDs**
- **Custom Curve Programming**
- **Store Test Set Ups**
- **Accuracy:**
  Source: ±0.025% of Rdg +0.5Ω or better
  Read: ±0.025% of Rdg +0.05Ω
  ±0.025% of Rdg +0.5Ω

Order #	Description	Price
JSCSC200G	Thermocouple and RTD Calibrator	$ 1,153

Altek 322/422
Thermocouple Calibrators

The most popular T/C calibrators

Calibrate all thermocouple instruments with the flip of a switch. Select a T/C type and instantly recall three output temperatures with the Quik-Chek Switch. Fast & Accurate every time.

- **Simulates a Thermocouple into Your Transmitters, Controllers and Recorders**
- **Measure T/C Temperature with MIN/MAX Recall**
- **0.1 ° and 0.001 mV Resolution**
- **Highest Accuracy in a Handheld**
  – 0.008 % accuracy (±0.2 °C typically)
- **322-1 for types J, K, T and E; 422 for Fourteen T/C types**
- **Carrying Case Included**

Order #	Description	Price
JS4669T	Altek 322-1 J, K, T, E, and mV Calibrator	$ 705
JS5086T	Altek 422 Universal Thermocouple Calibrator	$ 836
JS22171T	JKTE Mini Plug to Pigtail Lead Set	$ 42

Altek
Calibrator Kits

These convenient kits are designed to make it easy and quick to calibrate certain types of instruments in the field, and cover nearly any electronic process, temperature, frequency, or milliamp flow signal.

- **Two-Packs of Application-Specific Calibrators**
- **Portable, Battery Powered**
- **Soft-Sided Carrying Case**

Order #	Description	Price
JS533	J, K, T, E, T/C and RTD Calibrators (322-1/211)	$ 1,344
JS545	RTD and Milliamp Calibrators (211/334A)	$ 1,113
JS546	RTD and mA for HART Transmitters (434E/311A)	$ 1,578
JS556	J, K, T, E, T/C and Milliamp Calibrators (322-1/334A)	$ 1,166

Altek 311A
Universal RTD Calibrator

Calibrates all HART® Smart RTD Transmitters!

Calibrating RTD instruments has never been easier. Connect with 2, 3 or 4 wires and dial in the settingin Degrees F or C. Flip the Quik-Chek switch for single handed output of three key temperatures. RTD tables are built in.

- **Simulate RTDs into Smart Transmitters Including Rosemount and Honeywell**
- **Universal Compatibility with Process Instruments Including PLCs, DCSs and Multichannel Recorders**
- **Calibrate in Temperature for your RTD type**
- **Resolution to 0.1 °C or °F and to 0.01 Ω**
- **Typical Accuracy to 0.2 °C/0.3 °F**
- **Carrying Case and Test Leads Included**

Order #	Description	Price
JS23760T	Altek 311A Universal RTD Calibrator	$1,049
JS311A-KP	Altek 311A Universal RTD Calibrator, Key Pad Version	$1,049

Altek 211
RTD Calibrator

Calibrates traditional analog Transmitters and alarms

Checkout analog temperature transmitters and RTD indicators. Dials directly in degrees C and F.

- **Sources and Reads 8 RTD Types Plus Ohms**
- **±0.025% Accuracy**
- **Suitable for Low Excitation Currents**

Order #	Description	Price
JS4363T	Altek 211 RTD Calibrator	$ 696

Hart Scientific 9009
Dual Range Dry Block Calibrator

High and Low Temperature Dry Block Calibrator

This is a rugged industrial dry-well for calibrating industrial temperature sensors in the field.

- **Temperature Ranges-Low: -15 to 110°C; High: 50 to 350°C**
- **Operate Both Wells Simultaneously**
- **Uses One Common set of Inserts**
- **Quick Zero and Span Sensor Calibrations**

Order #	Description	Price
JS24590T	Dual Dry-Well, -15°C to 350°C, Black	$3,420
JS24590T-Y	Dual Dry-Well, -15°C to 350°C, Yellow	$ 3,420
	Call for Inserts	

Hart Scientific 9140
Mid-Range Field Dry Block Calibrator

This model gives you a range from 35° to 350°C (95° to 662°F) with ±0.5°C accuracy. Fast heating and cooling times and interchangeable multi-hole inserts speed your work and allow calibration of several sensors at one time.

- **Programmable Switch Testing and Software**
- **RS-232-C Standard with Software Included**
- **Interchangeable Inserts with 4.875" Immersion**
- **Heats to 350°C (662°F) in Only 12 Minutes**

Order #	Description	Price
JS22207T	Dry Block Calibrator, 92 to 662°F	$2,342
JS1400-C	Carrying Case	$ 71

Hart Scientific 9100S-A
Hand-Held Dry Block Calibrator

Highest Accuracy

Now you can calibrate temperature instrumentation in the field with the industry's first truly portable dry block calibrators. Eliminate the need to bring system components into the lab or drag your lab instruments around your plant!

- **Ranges from 14°F up to 752°F**
- **Fast Warmup and Cooldown**
- **Calibrate and Check T/Cs, RTDs, Thermometers, Readout Devices**
- **Portable and Lightweight**

Order #	Description	Price
JS5853T	Hand-Held Dry Block Calibrator, Six Holes	$1,278
JS5853T-1	Hand-Held Dry Block Calibrator, Four Holes	$1,278
JS5853T-2	Hand-Held Dry Block Calibrator, Two Holes	$1,278
JS5961T	Hand-Held Cooled Dry Block Calibrator	$2,085
JS1200-C	Carrying Case (5853T)	$ 39
JS1400-C	Carrying Case (5961T)	$ 71

Ametek/Jofra ITC Series
of Dry Block Calibrators

The dry block calibrator designed for uniformity in temperature measurement. Dual Zone heating block ensures critical temperature calibrations are performed consistently and accurately.

- **Three Temperature Ranges**
- **Dual-Zone Heating Block To Ensure Temperature Homogeneity Throughout Block**
- **Fast One-Key One Function Access to Automatic Switch Test and Auto Stepping**
- **High Accuracy and Long Term Stablity**

Temperature Range:	-23°C to 155°C(-9 to 311°F)
Accuracy:	±0.25°C (±0.45°F)
Stability:	±0.03 (±0.05°F)
Display Resolution:	1° or 0.1°C/°F
Heating Time to Maximum Temperature:	18 Minutes
Immersion Depth	6.3" (160 mm)
Immersion Tube Diameter:0.8"	
Power:	115 VAC (230 optional)
Size:	9.5 x 5.5 x 14.8" LWH

Order #	Description	Price
JSITC1551A	Dry Block Calibrator	$4,003

Fluke 189
Datalogging Digital Multimeter

One of the most advanced meters!

Features - precision, and accuracy to troubleshoot power distribution, industrial automation, process controls, and electronic/electro-mechanical equipment in the field or on the bench.

- 0.025% Basic DC Accuracy
- 50,000-Count Resolution with Instant Readings
- Internal Memory Allows for Stand Alone Logging and Storage of Up to 1000 Measurements for Later Viewing or Uploading to Optional FlukeView® Forms
- MIN/MAX to Record and Timestamp Values in Real-Time. Fast MIN/MAX Captures Peaks to 250 µS
- CAT III 1000V/CAT IV 600V

Order #	Description	Price
JS189E	Fluke 189 Datalogging Digital Multimeters	$399

Fluke 177
True RMS Digital Multimeter

These meters build on the long-standing reputation of the Fluke 70 series Digital Multimeters. They are the perfect tool for the field service technician who requires reliability and accuracy in their measurements.

- 6000 Count Display
- Auto Hold and Manual Hold
- IEC 1010 Rating: CAT IV 600V / CAT III 1000V
- Battery Access Door
- Compatible with Fluke ToolPak ™ Meter Hanging Kit

Order #	Description	Price
JS177E	Fluke 177 True RMS Digital Multimeter	$ 199

Fluke 112
True RMS DMM

Sized to carry anywhere in your shirt pocket or on your utility belt. Great for facilities personnel.

- Basic DC Accuracy of 0.7%
- Min/Max/Average
- Manual Reading Hold
- IEC 1010 Rating: CAT III 600V

Order #	Description	Price
JS112E	Fluke 112 True RMS Digital Multimeter	$149

Extech 470
DMM w/ Contact IR Temperature

The Extech 470 allows multimeter users to perform the standard functions of a multimeter while allowing measurement and detection of hot spots with the non-contact IR temperature sensor.

- Include Built-in Contact IR Thermometer with Laser
- Low Current Capability — Measures Down to 1 µA
- Audible and Visual Input Alerts
- IR Thermometer has 8:1 Distance to Target Ratio, 0.95 Fixed Emissitivity
- Temperature IR with Laser (-4 to 1382˚F)
- CAT III 600V, CE and UL Listed

Order #	Description	Price
JS470EXT	Extech 470 DMM with Contact IR Temperature	$ 115

Fluke 787
ProcessMeter

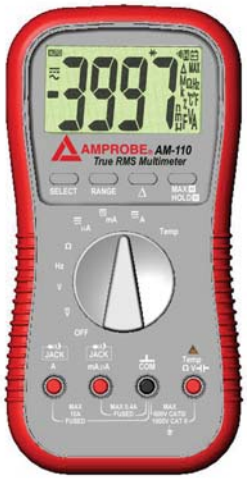
Save money with the 787 ProcessMeter;

Two instruments in one! A combination of a precision DMM and mA source all for the price of a typical loop calibrator.

- Precision 1000V, 440 mA Digital Multimeter
- 20 mA Current Source/Simulator
- 0.05% DC Current Accuracy, 1 µA Resolution to 30 mA
- True RMS AC Voltage Measurement to 1 kHz
- Diode Test and Continuity Beeper
- Manual Step (25%, Coarse, Fine) Plus Auto Step and Auto Ramp
- IEC 1010-1, CAT III 1000V

Order #	Description	Price
JS787E	Fluke 787 Process Meter	$ 549

Amprobe AM110
TRMS Digital Multimeter



Cost effective digital multimeter with audible warning against improper connection for technician safety. Peak hold feature allows "snap shot" of parameter under test.

- TRMS
- BEEP-JACK Audible Warning Against Improper Connection
- Peak Hold (30ms response time)
- Auto and Manual Ranging
- Relative Zero Mode
- Data Hold
- Diode Test
- Audible Continuity

Order #	Description	Price
JSAM110	Amprobe AM110 TRMS Digital Multimeter	$ 98

Fluke 80 Series V
Industrial Multimeters

Accuracy and diagnostic functions for maximum industrial productivity The new 80 Series V has improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems in electronics, plant automation, power distribution, and electro-mechanical equipment.

- **Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (87-5)**
- **True-rms ac voltage and current for accurate measurements on non linear signals (87-5)**
- **Built in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument (87-5)**
- **Measure up to 1000 V ac and dc**
- **Measure up to 10 A (20 A for 30 seconds)**
- **10,000 uF capacitance range**
- **Frequency to 200 kHz and % duty cycle**
- **Peak capture to record transients as fast as 250 _s (87-5, 87-5/E Kit)**
- **4_ digit mode (87-5, 87-5/E Kit)**

Order #	Description	Price
	Fluke-83-5 Industrial Multimeter Fluke-87-5 Industrial True RMS Multimeter with Temperature	

Fluke 45
Dual Display Multimeter

Two 5 digit, 100,000 count vacuum fluorescent displays allow you to make two different measurements at once. Measure the output of a DC supply and check its AC ripple at the same time.

- **Basic DC Accuracy .025% Rdg**
- **Twin 5-Digit Displays**
- **16 Measurements Including True RMS AC, dB, Frequency, and Audio Power**
- **Standard RS-232-C, Optional IEEE 488.2 Interfaces.**

Order #	Description	Price
JS4212E	Fluke 45 Dual Display Multimeter with Standard RS-232-C Interface	$749
JSFVF-SC3	Software & Cable for Fluke 45	$150

Fluke 87 Retro

Expand the life of your old, dirty 87s. Kit will convert old 87s to "like new" condition. You can install or Transcat will install for you as part of a normal calibration.

- **Meter Display Upgrade Kit**
- **TL71 and AC72 Leads and Clips**
- **Replacement Fuses**
- **Meter Cleaner Wipes**
- **New Boot**

Order #	Description	Price
JS87-RETROFIT	Fluke 87 Retro Kit	$ 87

Fluke TLK-225
SureGrip Master Accessory Set with Storage Case.

The number one most requested new accessory of 2003, the TLK-225 combines the entire new SureGrip accessory line into a single set, then adds a handy roll-up pouch. This will be a "must have" for true Fluke fans

Included with set:
- AC220 Plunger Style Alligator Clips
- AC280 Plunger Style Hook Clips
- AC283 Plunger Style Pincer Clips
- AC285 Large Jaw Alligator Clips
- TP220 Industrial Sharp Test Probes
- TL224 Right to Straight Silicone Insulated Test Leads
- 6-Pocket Storage Pouch

Order #	Description	Price
CSTLK225	SureGrip Master Accessory Set with Storage Case	$ 99

Fluke TLK-220
Accessory Set with Meter Carry Case

Sure to be a hit, this kit combines the accessories of Fluke's popular TL220 test lead set with an additional alligator clip, then puts all the pieces into a case large enough to hold a l arge DMM.

Included with set:
- AC220 Plunger Style Alligator Clips
- AC285 Large Jaw Alligator Clips
- TP220 Industrial Sharp Test Probes
- TL224 Right to Straight Silicone Insulated Test Leads
- Zippered Vinyl Carry Case with Moveable Divider

Order #	Description	Price
CSTLK-220	Accessory Set with Meter Carry Casy	$ 94

Amprobe ACD-14

Dual Display Clamp-on Multimeter

Dual display clamp-on meter allows user to capture two readings simultaneously.

- AC and DC Voltage to 600V
- AC Current to 400A
- Resistance to 40 MΩ with Continuity Buzzer
- Capacitance to 3000 mF
- Hold and Maximum Reading Functions
- Temperature Measurement
- Dual Display
- Safety: CE, UL ,CAT III 600V

Order #	Description	Price
JSACD-14	Amprobe ACD-14 Dual Display Clamp-on Multimeter	$ 89

Amprobe ACD-330T

Digital AC Clamp-on Multimeter

Ensure accurate AC readings with this True RMS sensing clamp-on meter. Dual display allows user to read frequency and current or voltage simultaneously.

- TRMS Sensing
- Dynamic Min/Max/Avg Recording
- In-rush Peak Current Capture (1mS response)
- Dual Display of Frequency with Current or Voltage
- Continuity Buzzer and Diode Test
- Reading Hold Function
- Maximum Jaw Opening 2.04" (52mm)

Order #	Description	Price
JSACD-330T	Amprobe ACD-330T Digital AC Clamp-On Multimeter	$ 191

Amprobe ACDC-400

Digital AC/DC Clamp-on Multimeter

Combines AC/DC current and voltage in an easy to use clamp-on meter. Data hold, max/min recording make the ACDC an ideal troubleshooting tool.

- AC/DC Current up to 400A
- AC/DC Voltage up to 600V
- Resistance Measurement
- Continuity Test
- Data Hold
- MAX/MIN Recording
- Relative Measurement
- Backlight
- Analog Bar Graph
- Accommodates Conductors up to 1.18" (30mm) in Diameter

Order #	Description	Price
JSACDC-400	Amprobe ACDC-400 Digital AC/DC Clamp-On Multimeter	$ 134

Yokogawa CL-135

True RMS Digital Clamp-On

Offers multi-range True-RMS AC current and True-RMS voltage readings with data hold capabilities.

- True-RMS Display
- 0-200 / 0-600 True-RMS AC Current Range
- 0-200 / 0-600 True-RMS AC Voltage Range
- 0-200 Ohms Resistance Range
- Data Hold Function
- CAT III

Order #	Description	Price
CSCL135	Yokogawa CL-135 True RMS Digital Clamp-On	$ 204

Fluke 300 Series

Clamp-on Meters

Fluke clamp on meters allows the user to connect directly around the cables and take measurements directly.

- Auto Shut-Off Maximizes Battery Life
- Small Body and Jaws
- Large, Backlit Display (334, 335, 336, 337)
- In-Rush Current Function (334, 335, 336, 337)
- True-RMS Versions (335, 336, 337)
- Improved Low Current Measurement Accuracy
- Display Hold Feature Locks Measurements on the Display
- Three-year Warranty
- CAT III 600V

Order #	JS321E	JS322E	JS333E	JS334E	JS335E	JS336E	JS337E
AC Response	Averaging				True-rms		
AC Current Range	0-400.0A	0-40.00A, 40.0-400.0A	0-400.0A	0-600.0A		0-600.0A	0-999.9A
DC Current Range	N/A					0-600.0A	0-999.9A
AC Voltage Range	0-400.0V, 400-600V		0-600.0V			0-600.0V	
DC Voltage Range	N/A	0-400.0V, 400-600V	0-600.0V			0-600.0V	
Price	$89	$99	$129	$149	$194	$274	$304

Fluke C75
Test Lead Case

Universal carrying case to store and transport your meter leads.

Vinyl carrying case with two inside pockets. Designed to carry test leads, test probes, or clips. Will not accommodate large probes. Size: 7.25 x 4.25 x 1.25" (190.5 x 106 x 31.8 mm).

Order #	Description	Price
JSC75	Test Lead Case	$ 11

Fluke TL20
Silicone Test Lead Extension Kit

Extend your test leads to reach those tight, hidden spots in troubleshooting

- **Includes 2 Each: AC220 Alligator Clips TP220 Test Probes and TL222 Test Leads**
- **Starter Kit for Inudstrial Applications**
- **Rated Up to 10A**
- **IEC1010-1, CAT III 1000V, CAT IV 600V**

Order #	Description	Price
JSTL20	Test Lead Extension Kit	$ 49

Fluke 80T-150U
Universal Temperature Probe

Add this to your multimeter to measure temperature. Ideal for measurement of air, surfaces, and non-corrosive liquids.

This accessory converts any DMM into a digital thermometer. The general purpose probe is permanently attached to the signal conditioning module, and is suitable for measurement of air, surfaces, and non-corrosive liquids.

Order #	Description	Price
JS80T-150U	Universal Temperature Probe	$ 129

Fluke
MeterCleaner™ Wipes

This is a new, unique item targeted at the owner of overmolded Fluke tools.

- **Can Also Be Used to Clean Hand Tools, Power Tools and Work Surfaces**
- **Same Product Used by Fluke's Own Service Labs**
- **Lint-free, Pre-moistened Towelette Easily Cleans One Meter**
- **Safe on Rubber**
- **Safe to the Environment**

Order #	Description	Price
CSMC6	MeterCleaner, 6-Pack	$ 10
CSMC50	MeterCleaner, 50-Pack	$ 59

Fluke TL81
DeluxeTest Lead Set

The TL81A includes all of the components from the TL80, plus:

- **Modular Safety Shrouded Test Leads**
- **Modular Probes with Banana Connector Handle (10A)**
- **Modular Hook Clip (5A)**
- **Alligator Clip (5A)**
- **Slide-on IC Probe Tip (3A)**
- **2 Bare Spade Lugs**
- **Quad-fold Nylon Pouch**

Order #	Description	Price
JSTL81	Fluke Deluxe Test Lead Set	$ 101

Fluke TL80
Test Lead Set

When safety matters. 10A probes are in accordance to CAT II 300V

- **Shrouded Right-angle Test Leads (1m)**
- **10A Test Probes**
- **Silicone Insulated Leads**
- **Insulated Alligator Clips**
- **Probe Tip Extender**
- **CAT II 300V**

Order #	Description	Price
JSTL80	Fluke Test Lead Set	$ 41

Fluke C550
Tool Bag

Rugged Bag for all Your Fluke Tools!

- **Rugged Fabric with Internal Frame**
- **Over 20 Inside and Outside Pockets and a Zippered Main Compartment**
- **Water Resistant**
- **Size (H x L x W): 13" x 20" x 9" (325 mm x 500 mm x 225 mm)**

Order #	Description	Price
JSC550E	Fluke C550 Tool Bag	$ 60

Pelican
Carrying Cases

Extreme ruggedness to protect your sensitive instruments.

- **They are Absolutely Water-Tight, Air-Tight, and Dustproof**
- **So Durable and Tough They Carry an Unconditional Lifetime Warranty Against Damage or Breakage**
- **Available with "Pinch and Pluck" Foam or Padded Divider Set**
- **An Optional Custom Die-Cut Foam is Available for Orders of Over 50 Units**
- **Call for Additional Case Sizes**

Order #	Description	Price
JS1200-❑	Pelican 1200 Case 9⅜ x 7⅜ x 4⅛"	$39
JS1400-❑	Pelican 1400 Case 12 x 9⅛ x 5⅛"	$71
JS1500-❑	Pelican 1500 Case 17 x 11½ x 6¼"	$107
JS1550-❑	Pelican 1550 Case 18⅛ x 14½ x 71¾"	$133
JS1600-❑	Pelican 1600 Case 21⅛ x 16⅛ x 7⅞"	$157

To Order Cases: Specify the Color Code in the ❑ C= Charcoal, S= Silver, Y= Yellow

Pomona Test Lead Kits/Sets

All leads are not created equally! Inherent design features provide maximum safety and performance!

Heavy-Duty Test Lead Kit

Electrical kit includes two each probe handles, medium alligator clips, heavy duty large alligator clips, slide-on extended tips, silicone test leads and couplers, one black, one red. Complete with two spade lugs and nylon pouch.

Order #	Price
JSTL5673A	$ 42

Deluxe Electronics Test Lead Kit

Comes with two each probe handles, medium alligator clips, Minigrabber® leads, Minipincer® leads, slide-on IC tips, slide-on extended tips, and test leads, one black, one red. Also includes two Maxigrabbers® with pincer tips and nylon pouch.

Order #	Price
JSTL5674A	$ 80

Multi-use Test Lead Kit

Has two each probe handles, right angle to straight plug test leads, flexible Maxigrabber® test clips with pincer tips, and medium alligator clips, one black, one red. Supplied in nylon pouch.

Order #	Price
JSTL5899	$ 46

Maxi-kit Professional Test Lead Set

Includes two each extendible tip probe leads, replaceable tip probe handles, test leads, couplers, medium alligator clips, heavy duty large alligator clips, Minigrabber® leads, Minipincer® leads, and slide-on IC tips, one black, one red. Also contains two spade lugs, dog leg micro tips, needle tips, shouldered micro tips, and four each standard brass tips. Comes in a nylon pouch.

Order #	Price
JSTL5677B	$ 86

Maxigrabber® Grip Clip Set

- Alligator Jaws Open to Fit 0.50" Dia.
- Set of Two, One Red and One Black Clip
- IEC1010 CAT III 1000V, 10A

Order #	Price
JSTL5912	$ 19

Maxigrabber® Set (with Pincer Tips)

- Pincer Opens to Fit Onto .080": Dia. Test Point
- Set of Two, One Red and One Black Clip
- IEC1010 CAT III 1000V, 10A

Order #	Price
JSTL5910	$ 19

Test Probe Handle Set w/ Banana Plug Tip

Test probe handle with brass caged banana plugtip and sheathed 4 mm banana jack in handle. Receptacle accepts flexible test leads. (Models 5907A, 5908A and 5909A). Set has one black and one red probe. Rating: 1000V RMS, 10 Amps, IEC1010 CAT III, P2.

Order #	Price
JSTL5906	$ 8

Industrial Test Lead Kit

Includes two each probe handles, right angle to straight plug test leads, and Maxigrabber® grip clips,one black, one red. Supplied in nylon pouch.

Order #	Price
JSTL5900	$ 42

Test Lead Kit for Bench DMMs

Contains two each probe handles, straight to straight plug test leads, Minigrabber® test clips with replaceable tips, and medium alligator clips, one black, one red. Also includes two spade lugs, 5 sets of replaceable tips and nylon pouch.

Order #	Price
JSTL5901	$ 45

Deluxe Heavy Duty Test Lead Kit

Contains two each probe handles, right angle to straight plug test leads, Maxigrabber® test clips with hook, Maxigrabber® with pincer tips, Maxigrabber® grip clips, and extra large jaw alligator clips, oneblack, one red. Includes nylon pouch.

Order #	Price
JSTL5904	$ 82

Extra Durable Probe Lead Set

- Heavy Duty Probes with Stainless Steel Tips
- Right Angle Sheathed Banana Plug
- 48" Long Silicone Wire
- Set of Two, One Red and One Black Probe.
- IEC1010 CAT III, 1000V

Order #	Price
JSTL5898	$ 10

Flexible Test Lead Set

- Right Angle Sheathed Banana Plug to Straight Sheathed Banana Plug
- 48" Long Silicone Wire
- Set of Two, One Red and One Black Lead
- IEC1010 CAT III, 1000V

Order #	Price
JSTL5907	$ 10

Replacement Test Leads

- Test Probes with Nickel/Brass Tips
- Right Angle Sheathed Banana Plug
- 48" Long Silicone Wire
- IEC1010 CAT III, 1000V

Order #	Price
JSTL5519	$ 9

Basic Electronic DMM Test Lead Kit

Contains 2 each (black/red): test probes with silicone insulated leads (banana plugs on meter end have no sleeve) and slide-on extended tips and alligatorclips (supplied in a reusable plasticcase). Fits most multimeters and other equipment with banana jacks.

Order #	Price
JSTL5672A	$ 20

Megger Meg-10

10 kV Insulation Testers

The Meg10, a high voltage insulation tester, is the ideal instrument for safely measuring the insulation resistance of armature and field windings in rotating machines (rated 1hp) or greater. Accordance to IEEE43:2000 ensures the user that the unit has met the criteria for high voltage testing in a safe manner.

- **Test Voltages (DC)500V, 1000V, 2500V, 5000V, 10000V**
- **Insulation resistance ranges**
  Digital: 10 kΩ to 50 GΩ @ 500V
  10 kΩ to 100 GΩ @ 1000V
  10 kΩto 250 GΩ@ 2500V
  10 kΩ to 500 GΩ @ 5000V
  10 kΩ to 500 GΩ @ 10000 V
- **Results Displayed as Insulation Resistance or Leakage Current**
- **Real Time Data Output and On-board Storage for Subsequent Download**

Order #	Description	Price
JSMEG10-01	10 kV Insulation Tester (Megohmmeter)	$ 4,406

Megger BM15

Analog Insulation Tester, 5kV

The BM15 is a 5kV analog insulation tester with a large analog display for ease of reading. Perfect for measuring insulation requirements where higher voltages are present, but sensitivity is less.

- **Four Selectable Test Voltages (500, 1000, 2500, and 5000 VDC)**
- **Dual Power Supply Option**
- **Lock-Down Test Push-Button Option for Extended Tests**
- **Auto Voltage Measurement Function Indicates Presence of External Voltage and Monitors Static Discharge**

Order #	Description	Price
JS23358E-1	Megger BM15 - Analog Insulation Tester, 5 kV	$ 1,736

Megger BM25

5 kV Insulation Tester

Our most popular insulation tester.
Variable voltage from 25 to 5,000 VDC with easy to read analog/digital displays. Save test time by automating the following tests; Polarization Index (PI), step voltage, and the new Dielectric Discharge.

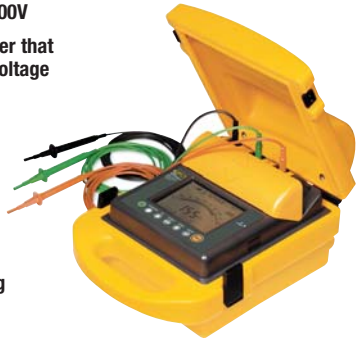
- **Analog/Digital Display**
- **Variable Test Voltage from 25 to 5000 VDC**
- **Digital Resistance Measurement to 500 GΩ or 5 TΩ, Analog to 1 TΩ**
- **Automated Testing**

Order #	Description	Price
JS22816E	Megger BM25 - 5 kV Insulation Tester	$4,001

Fluke 1550B

5 kV Insulation Tester

Safety and cost efficiencies make the 1550B megohmmeters the absolute right choice for electricians and instrument shop personnel. Save and stay safe with the 1550B



- **Test Voltages of 500V, 1000V, 2500V, 5000V**
- **Warning Voltage Function Alerts the User that Line Voltage is Present and Gives the Voltage Reading up to 600 VAC or DC**
- **Leakage Current**
- **Ramp Function (0-5000 VDC) for Breakdown Testing**
- **99 Memory Location**
- **Includes Quicklink 1550 Software and Optical Interface Cable for Downloading to a Windows PC**

Order #	Description	Price
JS1550E	Fluke 1550B - 5 kV Insulation Tester	$ 3,095

Megger BM400

Analog/Digital Insulation Testers

Combines a megohmmeter and a multimeter into one easy to use tool. This eliminates the need for the electrician to carry multiple tools to the field.

- **Test Voltages from 250 to 1000 VDC**
- **Insulation Resistance Measurement to 10 GΩ (10,000 MΩ)**
- **Complete Set of Digital Multimeter Functions**
- **Automatic Discharge of Item Under Test**

Order #	Description	Price
JS22231E	Megger BM400/2 - (500/1000VDC)	$ 569
JS22232E	Megger BM403/2 - (250/500/1000VDC)	$ 578

Fluke 1520

Insulation Tester

The Fluke 1520 megohmmeter is a handy insulaton resistance tester that also measures voltage and checks connections with its Lo-Ohms function.

- **Large Backlit LCD**
- **Three Output Voltages 250V, 500V, 1000V**
- **Insulation Resistance Testing Up to 4000 MΩ**
- **AC/DC Voltage Measurement Up to 600V for Safety**
- **Last Reading Memory Display**
- **Auto Discharge of Capacitive Voltage Charges**
- **Rugged, Splash-Proof Case with Impact-Absorbing Holster**

Order #	Description	Price
JS1520E	Fluke 1520 - Megohmmeter	$ 649

Megger BM23

Digital Insulation Tester

The ultimate in safety. While you are taking measurements and adjusting the item being tested, the analog bar graph lets you immediately see the response. You get hands free continuity measurement with a short circuit of at least 20mA and open-circuit voltage of 5V. Hands free allows you to focus on the test, not the instrument.

- **Test Voltages from 250 to 1000 VDC**
- **Insulation Resistance Measurement to 999 MΩ**
- **Continuity Range Measures 0.01Ω to 99.9Ω**
- **Continuity Buzzer Aids In Circuit Tracing**
- **Automatic Discharge of Item Under Test**

Order #	Description	Price
JS22846E	Megger BM223 - Digital Insulation Tester	$530

Megger 210170

Megohmmeter/Insulation Tester

Best choice when high ranges are needed for measuring resistance or insulation resistance.

- **Multiple Test Voltages for Spot and Step-Voltage Testing (100–1,000 VDC or 500–1,000 VDC)**
- **High-Resistance Readings Up to 20,000 MΩ with Extended Range Model**
- **Autoranging with Readings Up to 1999 MΩ with Digital Model**
- **Automatic Discharge of Item Under Test**

Order #	Description	Price
JS8003E	Megger 210170 - Hand Crank Megohmmeter	$ 948

Megger BM80

Insulation Tester / Multimeter

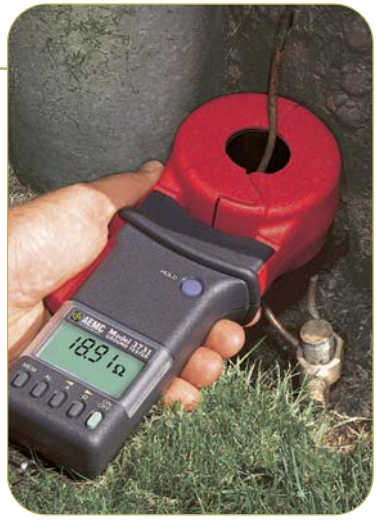
Combination of insulation tester and multimeter features make this premium insulation tester ideal for those technicians who require highly accurate insulation test results. Saves space in the tool box with combined capabilities.

- **Operate on Telecommunications Systems up to 25V**
- **50/500/1000V Test Voltages**
- **200 GΩ Insulation Resistance Range**
- **Digital Display Plus Analog Bargraph**
- **Include Automatic Discharge of Item Under Test, Live-Circuit Warning (25V Threshold)**

Order #	Description	Price
JSBMM-80	Megger BM80 - Insulation Tester / Multimeter	$1,064

AEMC 3731

Ground Resistance Tester



The 3731 clamp-on ground resistance tester makes it easy to conduct ground testing by simply clamping around the ground rod, the tester does the rest!

- **No Ground Rods or Wires Needed**
- **New 0.1Ω to 1200Ω Ground Resistance Range**
- **1 mA to 30A Ground or Leakage Current**
- **9.25 x 3.94 x 2.17"; 2.2 lbs.**
- **Jaw Opening 1.25"**

Order #	Description	Price
JS5718E	Model 3731 Clamp-on Ground Resistance Tester with Alarm and Memory	$ 1,954

Megger 560400

Motor Rotation/ Phase Sequencing Tester

Save time and avoid motor wiring miscues. Ensures safety by properly installing motors within the plant.

- **Determines:**
  - **Rotation Direction of One-, Two-, or Three-Phase Motors Before Connection**
  - **Phase Rotation or Sequence of Energized Power Circuits**
  - **Polarity of Instrument and Power Transformer**
  - **Phase/Polarity of Unmarked Motor Windings**

Order #	Description	Price
JS4249E	Megger 560400 - Motor Rotation/Phase Sequencing Tester	$ 561

AEMC 5600

Micro-Ohmmeter

This portable micro-ohmmeter with recharge-able batteries is perfect for applications that include measurement of contact resistance of circuit breakers and switches, wire to terminal connections, winding resistance of transformers, battery straps, motors and generators. Great tool for the plant electrician to keep the plant personnel safe.

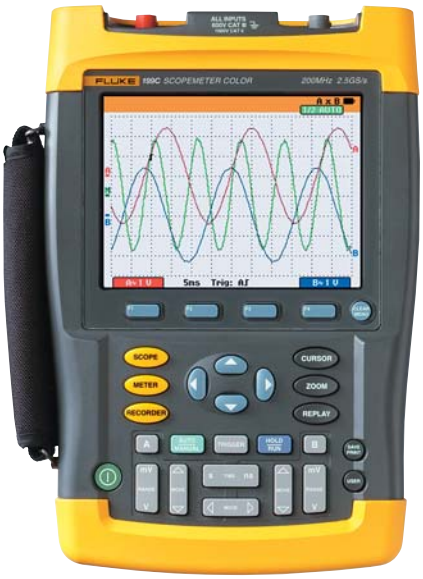
- **Resolution to 1 μΩ**
- **Provides Up To 10A Test Current**

Order #	Description	Price
JS5058E	AEMC 5600 -Digital Micro-Ohmmeter	$2,221
JS5059E	10A Kelvin Clip Leads (set of 2), Color-Coded, 10'	$ 177
JS5061E	1A Kelvin Clip Leads (set of 2), Color-Coded, 10'	$ 101

Fluke

Portable Oscilloscopes

When you need to see the waveforms and make electrical measurements. Great for seeing trends or capturing glitches in your signal.



- Dual-Channel, 60, 100, or 200 MHz Bandwidths
- Up to 2.5 GS/s Real-Time Sampling Per Input
- Connect and View™ Automatic Triggering, a Full Range of Manual Triggering Modes Plus External Triggering
- 24 Automatic Waveform Measurements
- Cursors, Zoom, and Real-Time Clock
- 1000V Safety Certified Independently Floating Isolated Inputs
- Includes a Built-in 5000-Count True RMS Multimeter and a TrendPlot™ Paperless Recorder

New Fluke ScopeMeter 190C Series Enhancements

- Waveform Reference, programmable via FlukeView Software
- Pass/Fail Testing
- Programmable Setup Names
- Sensitivity Improved to 2 mV/Div from 5 mV/Div
- New Version 4.1 FlukeView® Forms Software

Ordering Information and Specifications					
	190C Color ScopeMeter Series		190B Monochrome ScopeMeter Series		
Mfg#	199C	196C	199	196	192B
Bandwidth	200 MHz	100 MHz	200 MHz	100 MHz	60 MHz
Max. real time sample rate	2.5 GS/s	1 GS/s	2.5 GS/s	1 GS/s	500 MS/s
Display	144 mm Full Color LCD		144 mm Monochrome LCD		
Max. record length … in Scope mode: …in ScopeRecord mode:	1200 points per input channel 27,500 points per input (5 ms/div…2 min/div.)				
Number of inputs	2 plus external / DMM input, all isolated from each other and from ground				
Input sensitivity	2 mV/div. to 100 V/div.		5 mV/div. to 100 V/div.		
Glitch capture	Up to 3 ns using Pulse Width triggering; 50 ns peak detect at 5 ms/div. to 1 min/div.				
Trigger types	Connect-and-View®, Free Run, Single Shot, Edge, Delay, Video Frame, Video line, Selectable pulse width and External				
Scope Measurements	7 cursors measurements, 30 automatic measurements				
True RMS multimeter	5000 counts, Volts, Amps, Ohms, Continuity, Diode, Temp				
Order #	**JS199C**	**JS196C**	**JS199E**	**JS196E**	**JS192E**
Price	**$2,999**	**$2,699**	**$2,699**	**$2,345**	**$1,999**

AEMC

Three-Phase Power Quality Analyzer

The Best Value/Performance Choice!

Easy to use, the powerpad is a great tool for the plant electrician to quickly and easily record and analyze two and three phase power systems. The real-time color waveforms provide trend analysis as well as assist the technician in capturing power glitches.

- True RMS Measurements at 256 samples/cycle,
- Plug and Go Probe Set-up
- Display and Capture Voltage, Voltage and Power Harmonics to the 50th Order
- Capture Up to 50 Transients
- Alarm Surges and Sags
- Measures DC Amps, Volts and Power
- Download Data Via Dataview Software (included)

Order #	Description	Price
JS2130.75	PowerPad™ w/MN93 (240A)	$3,289
JS2130.76	PowerPad™ w/SR193 (1200A)	$3,378
JS2130.77	PowerPad™ w/24" 6500A AmpFlex™193-24	$3,556
JS2130.78	PowerPad™ w/36" 6500A AmpFlex™193-36	$3,734

Fluke 43B

Power Quality Analyzer

Advanced power system analysis in a hand-held tool

- Combines Capabilities of a Power Quality Analyzer, Multimeter and Scope
- Calculates 3-Phase Power on Balanced Loads
- Measures Power Harmonics, and Captures Voltage Sags, Transients and Inrush Current
- Records Two Selectable Parameters for up to 16 Days
- 20 Measurement Memories

Order #	Description	Price
JS43E	Fluke 43B Power Quality Analyzer	$2,195
JSC789	Soft Carrying Case	$ 80

Amprobe MT-2000

Multitester

Power Quality/Megohmmeter/Ground Resistance Tester

- Detects and Records Voltage Transients, Sag and Surges with Sampling Rate of 130 µs
- Built in Scope Displays Waveforms
- Records up to 64 Parameters Simultaneously Megohmmeter functions
- Tests Insulation of Wires, Cables, Transformers and Electrical Motors
- Selectable Test Voltages up to 1000V
- Programmable Timer to Perform the Dielectric Absorption Ratio Test
- Automatic Voltmeter Protects Against Mis-use on Hazardous Energized Systems

Order #	Description	Price
JSMT-2000	Amprobe Multitester	$ 1,779

Fluke
AC Voltage Detectors

VoltAlert™ AC voltage testers are easy to use—just touch the tip to a terminal strip, outlet, or cord. When it glows red, you know there's voltage in the line.

Order #	Description	Price
CS1AC-A1	Voltage Detector 90V AC to 600V AC	$ 22
CS1LAC	Voltage Detector 24V AC to 90V AC	$ 22

Fluke
Voltage/Continuity/Current Testers

Keep your people safe.
Check for stray voltages.

- **Unique Open Jaw™ Construction**
- **AC/DC Volts, AC Current, Resistance**
- **1000V or 600V Versions**
- **Checks Current without Breaking Circuit**
- **Detachable Slim-Reach™ Probe Tips**

Order #	Description	Price
CST5-600E	Voltage/Continuity/Current Tester, 600V	$ 100
CST5-1000E	Voltage/Continuity/Current Tester, 1000V	$ 110
CSC520E	Case for T5	$ 28

Yokogawa
Resistance Decade Box

The 2793-03, which measures resistance from 0 to 111.110 MΩ in 100Ω steps, is more suitable for the calibration of insulation-resistance testers or bridges.

- **1 Milliohm Steps**

Resistance Range:	0–111.1110 MΩ
Dial Composition:	100Ω, 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ
Accuracy:	±0.05% + 0.05Ω to 100 kΩ; ±0.2% to + 10 mΩ
Maximum Allowable Output:	100Ω steps–100 mA; 1 kΩ steps–30 mA; 10 kΩ steps–10 mA; 100 kΩ steps–3 mA
Insulation Resistance:	<10 MΩ @ 1000 VDC
Dielectic Strength:	5000 VDC minimum

Order #	Description	Price
JS2793-03	Resistance Decade Box	**$ 4,441**

AEMC 44SVD
Personal Safety Voltage Detector

Safe-to-Use!
Continuous operation provides audible and visible indication of live voltage – no adjustments to make!

- **Non-Contact AC Detector**
- **Sound Annunciator (buzzer)**
- **Bright LED**
- **Includes a Built-in Clip to Attach to Outer Garments, External Clothing or Belt**
- **Built-in Self-test to Ensure Proper Operation**
- **Detects 44 kV from Up to 30 ft (10m) Away**

Order #	Description	Price
CS2131.14	Personal Safety Voltage Detector Model 44SVD	$ 274

TIF
Voltage Detector–TIC Tracer

Using an audible and visual signal, the TIF 300HV allows electricians to quickly, safely detect AC Voltage within walls and other difficult to reach areas.

- **Safely Detect AC Voltage**
- **AC Voltage 30-1, 500 & 1,500 - 122,000 VAC**
- **Instantaneous Response**
- **Audible Signal**
- **Indicator Light**
- **UL, CE and MSHA Approved**

Order #	Description	Price
CS8266E	Voltage Detector- TIC Tracer	$ 50

IET
Decade Resistance Box

These decade boxes are ideal choices for measurement applications requiring superb accuracy, excellent stability

- **±0.01% Accuracy**
- **Low Zero Resistance**
- **Excellent Stability**
- **Low Temperature Coefficient**

Order #	No. of Decades	Total Resistance	Ohms Steps	Price
JS5473E	5	1.1111k	0.01	**$ 2,043**

Ametek
Pneumatic Hand Pumps

Economical pressure and vacuum generation

- **Precision Vernier Built into the Handle for Fine Adjustment**
- **Controlled Bleed Valve for Precise Pressure Reduction and Hysteresis Tests**
- **Hand Pump with Reference and Test Connections**
- **Open Vent to Release Pressure**
- **Swivel Connection for Reference Gauge**

Order #	Description	Price
JS3448P	Pneumatic Handpump - 0 to 300 PSI	$ 286
JS4040P	Pneumatic Handpump - 0 to 30 PSI	$ 283
JST-750	Pneumatic Handpump - 0 to 25 inHg (vacuum)	$ 288

Ralston
Hand Pump—High Pressure, Hydraulic

This hydraulic pump is compatible with oil, alcohol, other hydraulic fluids, and supplied with pressure hose and 1/4" NPT connections. Each unit has a vernier to allow for precise adjustments.

- **Hand Pumps—3000 PSI Hydraulic**
- **Compatible with Oil, Alcohol or other Hydraulic Fluids**
- **Comes with Pressure Hose and 1/4" NPT Connection**

Order #	Description	Price
JS7103P	Ralston Hydraulic 3000 PSI	$ 201

Ametek T-600 Series
Hydraulic Hand Pumps

These pumps are an inexpensive yet reliable solution for your hydraulic pressure source needs.

- **Proven Economical Design with Adjustable Swivel Fitting for Reference Instrument**
- **Ranges to 5,000 PSI / 350 bar**
- **Easy Pistol-grip Operation with Vernier Valve for Fine Adjustment and Vent for Relief**
- **Supplied with NPT and BSP Adapters for the Hose, Also Available with Reference Gauges**

Order #	Description	Price
CS3430P	Hydraulic handpump – 3,000 psi	$ 230
CST-620H	Hydraulic handpump – 5,000 psi	$ 359

Ametek
Hand Pumps—High Pressure, Hydraulic

These hydraulic pumps are compatible with oil, alcohol, other hydraulic fluids, and are supplied with pressure hose and 1/4" NPT connections. Each unit has a vernier to allow precise adjustments. .

The 5954P Pump Kit Includes: The 3430P pump along with a high pressure tubing kit (T-649), carrying case, and a package of calibration labels.

Order #	Description	Price
JS3430P	Ametek Hydraulic Handpump - 0 to 3,000 PSI	$ 230
JS5954P	Transcat Hydraulic Pump Kit	$ 416
JS6156P	Ametek Carrying case – with cutouts for gauges	$ 148

Transmation
Hand Pumps

Have a pump around when you need it.
Small enough to toss in with your screwdrivers and wrenches.

- **Precision Bleed Valve**
- **Vernier Adjustment Provides 0.001 PSIG Resolution**
- **1/8" FNPT Connection**

Order #	Description	Price
CS6215P	Hand-Actuated Pressure Pump	$ 226
CS4238P	Hand-Actuated Vacuum Pump	$ 226
CS5952P	100 PSI Pump Kit	$ 454

Ametek
Gauge Comparator

Ideal As a Secondary Pressure Standard
This pressure comparator test set consist of a hydraulic hand pump as a pressure source, a test manifold and a set of four U.S. Gauge 4-1/2" test gauges. Gauge PSIG spans vary depending on model.

- **Four Gauges in Each Set**
- **High Accuracy**
- **Simple Comparison of Gauge Readouts**
- **Ranges PSIG: 0-160/0-600/0-5000/0-10,000**
- **Accuracy: ±0.25% of Gauge Span**
  10,000 PSIG Gauges: ±0.5% of Gauge Span

Order #	Description	Price
JS4024P	Ametek Gauge Comparator	$3,581

Transcat 23614P
Hydraulic 10,000 PSI Pump

Use this hydraulic hand pump with oil or water to provide flexibility depending on your pressure application.

- **Use with Water or Oil**
- **Stainless Steel and Glass Construction—No Leaks or Rust**
- **Quick High Pressure Priming**

Order #	Description	Price
CS23614P	Transcat 23614P - Hydraulic Hand Pump	$ 795
CS23615P-1	Pressure Relief Valve 150–750 PSI (500 PSI)	$ 195
CS23615P-2	Pressure Relief Valve 750–3000 PSI (2000 PSI)	$ 195
CS23615P-3	Pressure Relief Valve 3000–6000 PSI (5000 PSI)	$ 195
CS23615P-4	Pressure Relief Valve 6000–10000 PSI (7500 PSI)	$ 19

Welch
Dry Vacuum/Pressure Pump

Generate vacuum or pressue 29.6 "Hg with no oil or water.

- **Vacuum to 29.6 "Hg and Pressure to 100 PSIG**
- **Free Air Displacement to 1.6 CFM (45 L/min)**
- **No Water or Oil Needed to Operate**
- **Vacuum/Pressure Regulators and Gauges**
- **Water Trap and Muffler Supplied**

Order #	CS2522B-01	CS2534B-01	CS2545B-01
Free Air Displacement CFM (L/min) @ 60 Hz	0.76 (22)	1.2 (34)	1.6 (45)
Utl. Pressure Torr (mBar)	100 (133)	70 (93)	60 (80)
Tubing	1/4" (7mm)		
Price	**$324**	**$372**	**$421**

KNF Neuberger
Pump Pressure/Vacuum

Because the connectors and wetted parts are Teflon or PVDF coated, these pumps protect against corrosive vapors, thus providing your instruments better life spans.

- **Dedicated Vacuum Pumps**
- **Oil-Free Operation**
- **High Performance**
- **Corrosion Resistant**

Order #	CS7130P	CS7131P	CS7132P
Flow Capacity: (at atm. pressure):	16 Std. L/min (0.67 SCFM)	30 Std. L/min (1.27 SCFM)	16 Std. L/min (0.67 SCFM)
Maximum Vacuum:	28.32 "Hg	28.35 "Hg	29.55 "Hg
Operating Temperature:	40 to 104°F	40 to 104°F	40 to 104°F
Power:	115 VAC, 60 Hz	115 VAC, 60 Hz	115 VAC, 60 Hz
Maximum Current Draw:	1.1A	1.5A	1.5A
Your Price	**$841**	**$1,228**	**$1,283**

Meriam
Pressure Calibrator/ Digital Manometer

Users can measure differential and gauge pressure with one very accurate digital manometer.

- **Eight Engineering Units**
- **±0.05% ±1 Digit Accuracy**
- **6212P and 6213P have Two Ports, and can Measure Differential as Well as Gauge Pressure**
- **Vacuum Measurements can be Taken with the High-Side Port Vented to the Atmosphere**

Model#	Inches	cm	PSIG H_2O	Inches H_2O	mm	kg/cm² Hg	kPa Hg	mBar
6211P & 6213P	2000	5080	72.10	146.8	3730	5.070	497.0	4970
6210P & 6212P	200.00	508.0	7.21	14.68	373.0	0.507	49.70	497.0

Order #	Description	Price
JS6210P	0–200 "H_2O	$ 884
JS6211P	0–2000 "H_2O	$ 884
JS6212P	0–200 "H_2O Differential	$ 982
JS6213P	0–2000 "H_2O Differential	$ 982

Meriam
Manometer

One manometer to cover all your pressure ranges.

- **±0.25% Rdg + 5 Digits (22°C) (Includes Effects of Linearity, Hysteresis and Repeatability)**
- **Gauge, Absolute, Vacuum, and Differential Pressure Ranges Available**
- **Ranges from 20 "H2O to 100 PSIG**
- **4-1⁄2-Digit LCD**
- **1⁄8" FNPT Connections**

Order #	Range	Resolution	Price
JS4375P	0–20 "H_2O	0.01	$ 288
JS4376P	0–200 "H_2O	0.01	$ 288
JS4377P	0–1000 "H_2O	0.1	$ 288
JS4378P	0–10 PSI	0.001	$ 288
JS4379P	0–30 PSI	0.01	$ 288
JS4380P	0–100 PSI	0.01	$ 288
JS4381P	0–50 mBAR	0.01	$ 288
JS4382P	0–500 mBAR	0.1	$ 288
JS4383P	0–2000 mBAR	0.1	$ 288
JS4384P	0–7 BAR	0.001	$ 288
JS4385P	0–30 PSIA	0.01	$ 342
JS4386P	0–1500 mm HgA	0.1	$ 342
JS4387P	0–60 "HgA	0.01	$ 342

Transcat
Tubing and Fittings

Enhance your pressure measuremtns

Order #	Description	Price
CS6218P	Low Pressure Tubing/Fitting Kit	$ 50
CS23626P-1	Hose Kit for Front Port	$ 299
CS23626P-2	Hose Kit for Top Port	$ 299
CS23626P-3	Hose Kit General Purpose	$ 299
CS5854P-3	High Pressure Tubing/Fitting Kit, 3 ft (6000 PSI)	$ 160
CS5854P-6	High Pressure Tubing/Fitting Kit, 6 ft (6000 PSI)	$ 174
CS23638P	10,000 PSI Tubing/Fitting Kit, 4 ft	$ 176

Transcat
Digital Test Gauge

Top Seller!
(10) selectable engineering units

- ±0.25% Accuracy
- Vacuum to 10,000 PSI
- Compound VAC to 15 PSI
- Min/Max Recall
- Over/Under Range Indication
- Zero Adjustment
- Rotatable Front Panel

Order #	Description	Price
CS23300P-❑	Digital Pressure Gauge	$ 659
CS5845P-1	Optional Carrying Case	$ 30
CSPPC011	Transcat Accredited Calibration	$ 110

Specify Pressure Range In ❑ when Ordering

Beta BetaGauge P.I.
Digital Pressure Test Gauge

The BetaGauge P.I. combines the accuracy of digital technology with the simplicty of an analog gauge.

- 0.05% FS Accuracy
- The 5-digit, 0.65" High Digital Display
- MIN/MAX Function
- Field Recalibration
- Seals: 316 SS
- Quick-couples Meet 3A Standards
- Kit Includes Calibration Hand Pump and Fittings(not shown)

Order #	Description	Price
JSBETAGuagePI-15-Kit	15 PSI Pressure Test Gauge Kit	$ 645
JSBETAGuagePI-100-Kit	100 PSI Digital Pressure Test Gauge Kit	$ 645

Crystal Engineering
Digital Pressure Gauge

Provides Intrinsically safe and high accuracy!

- ± (0.1% of reading) Accuracy (Includes all effects of linearity, hysteresis, repeatability, temperature (-10 to 50°C) and stability for one year)
- Exia Intrinsically Safe, Class I, Division I, Groups A, B, C, D – T4
- 1500 Hour Battery Life
- RS232 Port - Automatic Field Calibration Capable

Order #	Max PSI	Description	Price
CSXP2-15	100	VAC to15 PSI Digital Gauge	$ 646
CSXP2-100	200	VAC to 100 PSI Digital Gauge	$ 553
CSXP2-500	1000	500 PSI Digital Gauge	$ 646
CSXP2-1K	2000	1,000 PSI Digital Gauge	$ 646
CSXP2-5K	7500	5,000 PSI Digital Gauge	$ 693

Ashcroft
Precision Digital Pressure Gauge

Industry Leading Accuracy!

- Industry Leading Accuracy: 0.5%
- Breakthrough Display Height
- Configurable Options Including:
  Twelve Selectable Engineering Units
  Seven Languages Adjustable Update and Dampen Modes
  Field Calibration Capability

Order #	Description	Price
JS30-2089-SD-02L-100	Digital Test Gauges, 3" SS, High Accuracy 0.05%, 100 PSI	$ 712
JS30-2089-SD-02L-30	Digital Test Gauges, 3" SS, High Accuracy 0.05%, 30 PSI	$ 712
JS30-2089-SD-02L-VAC	Digital Test Gauges, 3" SS, High Accuracy 0.05%, VAC	$ 712

3D Instruments, LLC
Digital Test Gauge/Calibrator

Microprocessor Based Digital Test Gauge

- 0.10% of Reading Accuracy for Positive Pressure and 2% FS for Vacuum Range
- Intrinsically Safe for use in Cl 1, Div 1, Group A,B,C and D Hazardous Area Locations.
- Vacuum Measurement on all Ranges
- 5-Digit LCD with Bold 0.65" High Digits
- HI/LO Pressure and TARE Function
- Selectable Engineering Units

Order #	Description	LCD Resolution	Price
CS65514 - 23B-55	Vac-100 PSI	.01	$ 581
CS65514 - 26B-55	Vac-300 PSI	.01	$ 581
CS65514 - 27B-55	Vac-500 PSI	.01	$ 679
CS65514 - 32B-55	Vac-2000 PSI	.1	$ 679
CS65514 - 33B-55	Vac-3000 PSI	.1	$ 679
CS65514 - 35B-55	Vac-5000 PSI	.1	$ 730

Call for other Ranges

Vaisala
Humidity, RH/Temperature Indicators

The Instrument of Choice for Field Humidity Measurements!

In addition to RH and temperature, these indicators will automatically calculate dewpoint, absolute humidity, wet bulb temperature, and mixing ratio.

- **Accuracy:**
  (23030A) ±1% RH (0 to 90%); ±2% (90 to 100%)
  (23031A) ±2% RH (0 to 90%); ±3% (90 to 100%)
- **Temperature Ranges: -40 to 212˚F (23030A)**
  -40 to 140˚F (23031A)
- **Measure Temperature and RH; Calculate Dew Point, Wet Bulb Temperature, Absolute Humidity, Mixing Ratio**
- **0 to 100% RH with 0.1% Resolution**

Order #	Description	Price
JS23030A	Humidity, RH/Temperature Indicators - High Temperature Probe	$ 886
JS23031A	Humidity, RH/Temperature Indicators - Higher RH Accuracy	$ 886

Dickson
RH/Temp/Dew Point Indicator

Portable Meter Features Easy One-Handed Operation

The 5021HTD allows quick, accurate measurements of temperature and humidity and calculates dew point from those readings.

- **Measures Temperature and RH, Calculates Dew Point**
- **Excellent Accuracy and Resolution**
- **Stores Up to 16 Readings**
- **Switchable °F/°C**

Order #	Description	Price
JS5021HTD	RH/Temperature/Dew Point Meter	$ 331
JS5509H	Calibration Capsule (Kit)	$ 169

Vaisala
Humidity/Temperature Indicator

As easy as 1-2-3.

Press on, position the probe, and select the measurement type.

- **Lightweight, Pocket-Size RH/Temperature Measurement**
- **Excellent Accuracy and Resolution**
- **Automatic Power-off Function**

Order #	Description	Price
JS3477A	Relative Humidity/Temperature Indicator, °F	$ 441
JS3478A	Relative Humidity/Temperature Indicator, °C	$ 441

Hart Scientific 1502
Precision Thermometers

They can be paired with a wide variety of sensors to create a system accurate enough to calibrate process sensors and liquid in glass thermometers.

- **RTD and Thermistor Versions**
- **±0.004°C Accuracy for RTDs**
- **Up to ±0.002°C for Thermistors**
- **Battery Packs Available**

Order #	Description	Price
JS5800T	Precision RTD Thermometer	$ 1,473
JS24202T	Precision Thermistor Thermometer	$ 1,473

Hart Scientific
Precision Hand-Held Thermometer

The 1521T offers true standards thermometry, reads 25- to 100-ohm RTDs in three curves and all types of thermistors. Probes attach through Hart's new "INFO-CON" connector, which lets you change probes without reprogramming.

- **Provides RTD Accuracy to ±0.025°C, Thermistor to ±0.005°C**
- **Unique Connector Stores Probe Cal Data**
- **Reads Multiple Curves**
- **Resolves Values to 0.001°C with Accuracy Maintained**

Order #	Description	Price
JS1521T	Precision RTD/Thermistor Thermometer (Readout only)	$ 974
JS1522T	Precision RTD/Thermistor Thermometer (Logging)	$1,316
JS9934-S	Logware Software (single user)	$ 200
JS9318	Carrying Case, fits 1521 and 12" Probe	$ 171

Vaisala
Humidity and Temperature Transmitter

The HMP233 is ideal for critical areas and applications where humidity, temperature, or dewpoints tend to fluctuate.

- **Available Outputs of RH and Dewpoint**
- **Accuracy: ±1% RH (from 0 to 90%); ±2% RH (from 90 to 100%)**
- **Available in Wall Mount and Choice of Other Probes and Temperature Ranges**

Order #	Description	Price
JSHMP233A1A0A2AA12C2A3B	0-100%RH/-40 to +80 °C	$ 912

Hart Scientific 1620-S

Temperature/Humidity Paperless Recorder

Replaces your circular chart recorder!

Reduce calibration downtime by utilizing the removable probes that contain their own calibration data. By keeping a spare set of sensing devices, the unit is never out for calibration, and therefore is always busy collecting data.

- **Two Channels Measure Ambient Temperature to ±0.25°C and % RH to ±2%**
- **Alarm Settings are Visual and Aural, Quickly Set for Temperature and RH, PLUS Rate of Change for Temperature and RH and Instrument Fault Conditions**
- **On-Board Memory Holds up to 400,000 Time/Date-Stamped Readings PC Card Holds Millions More!**
- **Detachable Probes Contain their own Calibration Data for Easy Recalibrations**

Order #	Description	Price
JS1620-S-115	The DewK Thermo-Hygrometer 115V	$1,495
JS9328	Protective Case for 1620, two probes, PC Card, RS-232 cable, power cord	$ 261
JS9936-S	LogWare III, Single-PC license	$ 280

Dickson

Recorder RH/Temperature/Dew Point

An industry standard in pharaceutical labs. Flexibility is the key on this popular circular chart recorder. User can select recording times, degrees C or F, and selectable alarms.

- **Records Two Variables**
- **User-Selectable Recording Times**
- **8" Chart; 1° and 1% RH Resolution**

Each Unit Includes: Box of charts: sixty 7-day, -20 to 120°F (C417), pens—1 red, 1 blue (5511H), AC adapter (21346), NIST certificatewith one data point, and instructions.

Order #	Description	Price
JS5508H	Humidity, Temperature, Dewpoint Recorder	$ 552
JS5508H-240	Humidity, Temperature, Dewpoint Recorder, 240V	$ 637
JS5509H	Humidity Calibration Kit	$ 169
JS5510H-10	10' Extension Cable for Probe	$ 33
JSC417	Chart, -20 to 120°F (Box/60), 7-Day	$ 20
JSC473	Chart, -20 to 50°C (Box/60), 7-Day	$ 20

Raytek

Infrared Thermometers

Get the newest laser technology and unmatched high-end performance with these IR thermometers.

- **Precise Laser Sighting**
- **Non-Contact Only and Non-Contact/Contact Models**
- **Measure from Any Distance**

Order #	Description	Price
JS23600T	IR Thermometer, Standard Model (MX2)	$ 574
JS23602T	IR Thermometer, with Data-Management Software, T/C Probe, RS-232 Cable, and Power Supply	$ 886
JS23603T-1	Pouch and Carrying Kit	$ 40
JS23603T-8	Printer and Hard Case w/ Cable	$ 441

Extech RH101

Hygro-Thermometer + Infrared Thermometer

Humidity, Air Temperature plus IR for non-contact Temperature measurements.

- **Combination Humidity Meter Plus Infrared Thermometer Features a Super Large Backlit Dual Display**
- **Primary and Secondary Displays — Primary Display is User Selectable for IR or Humidity; Secondary Always Displays Ambient Temperature**
- **Infrared Thermometer has Built-in Laser Pointer and an 8:1 Distance to Target Ratio**
- **Auto Power Off**
- **Data Hold and MAX**

Order #	Description	Price
JSRH101	Hygro-Thermometer + Infrared Thermometer	$ 133

Extech 42530

Wide Range Infrared Thermometer

Wide range temperature measurements from -58 to 1000°F, 0.1° resolution

- **Built-in Laser Pointer Identifies Target Area**
- **Backlighting Illuminates Display for Taking Measurements at Night or in Areas with Low Background Light Levels**
- **Audible and Visible Overrange Indicators**
- **Automatic Data Hold when Trigger Released**

Order #	Description	Price
JS42530	Wide Range Infrared Thermometer	$ 88

Fluke 61

Infrared Temperature Probe

Bright Laser Beam Provides Easy Targeting

- **Range: -18°C to 275°C (0°F to 525°F)**
- **Accuracy: ±3°C (5°F) between -18°C (0°F) to -1°C (30°F) ±2% of Reading or 2°C (3.5 F) from -1°C (30°F) to 275°C (525°F)**
- **0.95 Fixed Emissivity**
- **0.2 °C (0. 5 °F) Resolution**
- **8:1 Distance to Spot Ratio**

Order #	Description	Price
CS61T	Infrared Thermometer	$ 109

Ametek 1726
Tachometer, Contact/Photo

Combine contact and non-contact tachometer into one unit.

- Contact and Non-Contact Measurement
- Up to 99,999 RPMs (Optical); 20,000 RPMs (Contact)
- 18 Measuring Modes Including Linear Values
- Battery Operated
- Min/Max/Avg and Last Reading Memory
- Accuracy: Angular Velocity ±0.025% Rdg + 1 LSD
- Linear Measurement: ±0.2% Rdg + 1 LSD

Order #	Description	Price
JS7261FST	Contact/Photo Tachometer	$ 287

Ametek 1965
Stroboscope/Tachometer

Use as a Strobe: Observe linear motion of objects on conveyor belts; check slippage; verify printing press register; determine the speed of motors, gears, pulleys, and other rotational equipment. Or as a Tach Magnetic pickup senses movement of gears, keys, and other ferrous machine parts.

- Direct 20-31,250 Flashes/Minute, 120-99,999 RPM
- Flash Timing: 31,251 to 62,500 Every Other Pulse; 62,501 to 93,750 Every Third Pulse; 93,751 and Higher Every Fourth Pulse
- Accuracy: ±0.01%

Order #	Description	Price
JS3156FST	Stroboscope/Tachometer, 115V	$ 623
JS3156FST-220	Stroboscope/Tachometer, 220V	$ 623
JS3216FST	Carrying Case	$ 151

AEMC CA895
Carbon Monoxide Tester

Quickly and easily alerts plant personnel to levels of carbon monoxide.

- Easy One-Hand Operation
- Two Measurement Modes: "Normal" for Detection of CO Source and "Average" for Precise Measurement
- "Beeper" Indication of Possible Risk
- MAX and Hold Functions

Order #	Description	Price
JS2121.35	Carbon Monoxide Meter	$ 222

Shimpo
Laser Tachometers

Employs sophisticated technology to provide you greater measuring distance capability, increased measuring range, and expanded memory.

- Range to 99,999 RPM Covers Wider Range of Applications
- Memory Stores up to 10 Readings plus Last, MAX, MIN;

  Retains Readings for 5 Minutes
- Rugged Aluminum Housing Provides Exceptional Durability

Order #	Description	Price
JS24519FST	Laser Tachometer with LCD Display	$ 263
JS24521FST	Laser Tachometer with LED Display	$ 263

Extech
Sound Level Meter

Maximize the safety of your plant personnel by using the Extech sound level meters to monitor excessive and unsafe noise within the plant.

- Built-In Calibration at 94 dB
- Select A or C Frequency
- Meets IEC 651 Type 2Standards (407736)
- Two Ranges: 35 to 100 dB, 65 to 130 dB
- 0.1 dB Resolution
- Accurate to ±2 dB (Model 407735); ±1.5 dB (Model 407736)

Order #	Description	Price
JS407735	Digital Sound Level Meter	$ 195
JS407736	Digital Sound Level Meter - High Accuracy	$ 222

Bacharach
Portable Combustion Analyzer

Affordable, Reliable PCA from an Industry Leader The 23034A Series is ideal when you want to determine the safety and efficiency of combustion equipment. Reduces service call time by providing quick test results. Use the pushbutton keypad and simple menus to directly measure flue gas oxygen content and temperature

- Simultaneously Displays Up to Eight Measurements
- Stores Up to 100 Tests
- User Naming and Customer I.D. Features (Models 24034A-55 and 24034A-65 Only)
- 70 mBAR Pressure Measurement
- HVAC/Gas Utilities/Boiler Service

Order #	Description	Price
JS24034A-10	Portable Combustion Analyzer CO	$ 1,304
JS24034A-55	Portable Combustion Analyzer with Direct CO and Draft	$ 1,598
JS24034A-65	Portable Combustion Analyzer with Direct CO, Draft, and NOx	$ 2,399

Metrix
Vibration Meters

These compact units provide a quick way to test for excessive vibration. Simple to use—just hold the probe end against a vibrating surface and check the meter reading.

- **Instant Vibration Readings**
- **Portable, Battery Powered**
- **Easy to Use**

Order #	Description	Price
JS5174VM	Vibration Meter, Digital, 2"/Sec Peak	$ 659
JS5175VM	Vibration Meter, Digital, 2"/Sec RMS	$ 659
JS7321FST	Extension Probe	$ 40
JS7322FST	Shaft Rider Fork	$ 58

UE Systems
Ultrasonic Inspection Systems

Use this system for a multitude of inspection and troubleshooting applications: detect leaks in pressure/vacuum systems, steam traps and valves, and tanks and piping; check for arcing, tracking, and corona in electrical apparatus

- **-28 "Hg to 600 PSI in a Single Pump**
- **Precision Vernier and Vent Controls**
- **Reaches 30 or 100 PSI Faster than Any Other**

Order #	Description	Price
CS23577E	Ultrasonic Inspection System	$ 1,420

Nova Pocket Air Check
Combustible Gas Leak Detector

Portable and highly sensitive to combustible gases providing simplicity in operation at a very affordable price. Small enough to fit into your shirt pocket, but, accurate enough to quickly pinpoint leaks in pipes, valves, fittings and appliances.

- **Detects Natural Gas, Methane, Propane, Hydrogen and Butane**
- **Highly Sensitive Solid-state Sensor**
- **Operates Up to Eight Hours on 2 AA Alkaline Batteries**
- **Has Both Audible and Visual Alarms**

Order #	Description	Price
CS500A0300A	Pocket Air Check	$ 42

Extech CO52
Flammable Gas Leak Detector

Detects all combustible gases as low as 50ppm with easy one key operation!

- **LCD Display with Nominal 100, 1000 and 10,000 ppm Indicators**
- **Audible Beeper Increases Pitch Tone as the Concentration of Gases Go Up**
- **Auto Zero on Start Up**
- **5 Second Response Time**

Order #	Description	Price
CSCO52	Flammable Gas Leak Detector	$ 177

Meterman TMA10
Anemometer/Thermometer

The TMA10 is ideal for HVAC/R technicians measuring Heat/Ventilation/Air conditioning/ Refrigeration wind flow and temperature.

- **Measure Air Velocity or Air Flow**
- **RS232 Interface Output with Optional Software and Cable, TM-SW**
- **Continuous Moving Average for Up to 2 Hours**
- **MIN/MAX/AVG Reading on a Single Point**
- **Air Velocity Average for Multiple Points**
- **Data Hold to Freeze Measurement Display of Both Readings**
- **Obtain Air Flow (CFM) Average for Multi-point**

Order #	Description	Price
CSTMA10	TMA10 Anemometer/Thermometer	$ 200

Alnor RVA+
Rotating Vane Air Velocity Meter

Perfect for grilles, exhaust fans and clean room hoods.

- **Measures Air Velocity in FPM or MPH**
- **Measures Air Volume in CFM**
- **4" Head Swivels to 90˚, 180˚, or 270˚, Allowing Display to Face the Operator**
- **One Touch or Continuous Average Measurements**

Order #	Description	Price
CS634.150.210	Rotating Vane Air Velocity Meter	$533

Extech ExStik™
pH Meter

Portable and highly sensitive to combustible gases providing simplicity in operation at a very affordable price. Small enough to fit into your shirt pocket, but, accurate enough to quickly pinpoint leaks in pipes, valves, fittings and appliances.

- Memory Stores/Recalls 15 Readings
- Data Validation Indicators
- Easy to Replace Electrode Modules Can be Used with any ExStik™ Meter
- Flat Surface Electrodes
- pH: 0.00 to 14.00
- Accuracy: ±0.01 pH

Order #	Description	Price
CSPH100	ExStik™ pH Meter	$ 79

Hanna HI 931001
PH and ORP Electrode Simulator with Display

By simply connecting the HI 931001 to your meter's input socket and turning the dial, pH readings can be simulated from 0 to 14 pH in 0.01 steps.

- Easy- to-Use Simply Link up to the pH Meter's Electrode Socket
- Multiturn Dial with 0.01 pH Steps from 1 to 14 pH
- Portable and Lightweight.
- 500 Hours of Continuous Battery Life
- BNC Connectors

Order #	Description	Price
CS5289PH-2	pH/ORP simulator	$ 167
CSHI7858/1	1 meter cable	$ 17
CSHI7858/3	3 meter cable	$ 23
CSHI710009	Blue rubber boot	$ 26
CSHI710010	Orange rubber boot	$ 26
CSHI710001	Soft carrying case	$ 19
CSHI721316	Hard carrying case	$ 32

Transcat
pH Accessories—Buffer Solutions

Transcat offers buffer solution standarized against NIST-certified PH references.

pH Buffer Solutions

These Transcat color-coded buffers are for the calibration of pH meters and have been standardized against NIST-certified pH references. These buffers are accurate to within ±0.01 pH at 25°C.

Order #	Description	Price
CS5827PH-4	Transcat pH 4.00 Buffer (500 ml)	$ 9
CS5827PH-7	Transcat pH 7.00 Buffer (500 ml)	$ 9
CS5827PH-10	Transcat pH 10.00 Buffer (500 ml)	$ 9

Rice Lake Weighing Systems
Precision Laboratory Stainless Steel Individual Weights

Precision and standards weights for pharmaceutical and process plants.

Weight	Order #	Price	w/Calibration Report	w/cert of Accuracy
200g – 1 mg	JS12462RL	$ 662	$ 1,489	$ 779
200g – 100 mg	JS45960RL	$ 632	$ 1,367	$ 656
200g – 1 g	JS12468RL	$ 442	$ 797	$ 534
Call Transcat for other sets of Precision Laboratory Weights				

Mettler Toledo Wildcat
Analog Bench Scale

Designed to meet the real world requirements of manufacturing, agricultural packaging, and general weighing applications AND meet your budget requirements.

- Wildcat — Formed and Welded Carbon Steel Frame - Polyurethane Paint
- Wildcat on Wheels— Fabricated Steel Frame - Polyurethane Paint
- Wildcat on Wheels— Four Polyurethane Wheels (two with locking safety brakes)
- Fabricated Stainless Steel 304L Platter
- AC or Battery Operation

Order #	Max Capacity (lb/kg)	Min Resolution (lb/kg)	Platform Size	Overall Size	Price
JSWS30VR000	60 lb / 30 kg	0.02 lb / 0.01 kg	12" x 14" x 4"	12" x 20"x 22"	$ 695
JSWS60VR000	150 lb / 60 kg	0.05 lb / 0.02 kg	12" x 14" x 4"	12" x 20"x 22"	$ 695
JSWS150VR000	300 lb / 150kg	0.1 lb / 0.05 kg	16" x 20" x 4"	12" x 20"x 22"	$ 795
Wheeled Wildcat					
JSWS250VR000	500 lb / 250 kg	0.2 lb / 0.1 kg	20" x 28" x 8"	20" x 33.5"x	$1,399